

**Notice of Allowability**

Application No.

10/666,945

Examiner

Hien D. Vu

Applicant(s)

EICHORN ET AL.

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication on 11/7/05.
2. ☒ The allowed claim(s) is/are 20, 22 and 25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 11/10/05.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
**HIEN VU**  
**PRIMARY EXAMINER**

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Douglas Fekete on 11/7/05.

The application has been amended as follows:

Claim 20. (Amended)      A method of forming an electrical connection in through-holes defined in a circuit board substrate, comprising:

    providing a circuit board substrate having first and second surfaces and through-holes extending between said first and second surfaces;

    providing a pin block, said pin block comprising a dielectric housing having a body and at least one stand-off, said body having a board mounting face and an opposed mating face, said at least one stand-off extending from said board mounting face;

    providing conductive terminals, each having first and second ends, each of the terminals being positioned in said pin block such that said first and end extends through said body between said board mounting face and said mating face;

    providing first conductive pads on sad first surface of said circuit board substantially adjacent said through-holes;

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placing solder paste on said first conductive pads spaced apart from the through-holes;

assembling said pin block and said terminals to said circuit board substrate, such that each of said terminals is placed into one of said through-holes such that said first end is exposed for electrical connection with a mating element on said first side of said circuit board and said second end is exposed for electrical connection with a mating element on said second side of said circuit board, and further such that said board mounting face of said pin block faces the first surface of the printed circuit board and said at least one stand-off placed between the terminals and against said first surface of said circuit board substrate to locate said pin block a sufficient distance from said circuit board to enable a solder fillet to form between said conductive terminal and said first conductive pad; and

re-flowing said solder paste to flow solder into said through-holes and form solder fillets that electrically connect said terminals with said first conductive pads;

the method further comprises the step of placing a stencil over said through-holes prior to said step of placing solder paste on said first conductive pads to prevent said solder paste from being placed in said through-holes and said method further comprises the step of removing said stencil prior to said step of placing said terminals into said through-holes.

Claim 22. (Amended) A method as recited in claim 20, further comprising the step of providing second conductive pads on said second surface of said circuit board substantially adjacent said through-holes;

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wherein said step of causing said solder paste to flow further includes causing said solder fillets to flow through said through-holes such that said fillets electrically connect said terminals with said second conductive pads.

Claims 12-19 and 23 have been canceled.

Claim 25. (Amended) A method as recited in claim 20, wherein each of said through-holes includes a plating extending between said first and second surfaces of said circuit board.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien D. Vu whose telephone number is 571-272-2016. The examiner can normally be reached on 9-5.

HV  
11/10/05



**HIENVU  
PRIMARY EXAMINER**